

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 45789/IML	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB 03/04877	International filing date (day/month/year) 07.11.2003	Priority date (day/month/year) 07.11.2002
International Patent Classification (IPC) or both national classification and IPC G01N21/03		
Applicant E2V TECHNOLOGIES (UK) LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
- I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 02.06.2004	Date of completion of this report 03.03.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Stuebner, B Telephone No. +49 89 2399-2179



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/04877**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-14 as originally filed

Claims, Numbers

1-16 as originally filed

Drawings, Sheets

1/6-6/6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/04877**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2-16
	No: Claims	1
Inventive step (IS)	Yes: Claims	
	No: Claims	1-16
Industrial applicability (IA)	Yes: Claims	1-16
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/04877

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. The following documents (D) are referred to in this report:

D1: US-B1-6 469 303

D2: GB-A-2 316 172

D3: GB-A-2 245 058

D4: US-A-4 668 635

2. As indicated in the Search Report Claim 1 is drafted so generally that a plurality of documents disclose all or at least all essential features of this claim; see e.g. D1, D3 or D4.

E.g. in D4 (see col.11, l.34 to col.12, l.5; Fig.3) all features corresponding to Claim 1 are disclosed.

That is, D4 discloses:

A gas sensor (100; Fig.3 of D4) comprising a chamber (7) arranged to admit (9) gas, one or more radiation sources (60), a plurality of detectors (90, 91) sensitive to radiation from the one or more sources, and a plurality of respective reflective curved surfaces (31, 32, respectively), the detectors each being arranged to receive radiation from the one or more sources reflected by the respective curved surfaces of curvature such that light from the one or more sources is focussed (71, 72) onto each detector.

It should be noted that also the gas sensor according to D4 comprise detectors 90, 91 and respective curved surfaces 31, 32, and light from the source is focussed by these surfaces onto each detector after being reflected by layers 20, 21.

Furthermore, from the wording of Claim 1 it is not apparent that multiple detectors can be accommodated in a compact chamber type gas sensor as indicated e.g. in the figures of the application.

Thus, Claim 1 lacks novelty.

3. In Claims 2-16 only slight constructional changes in the apparatus of Claim 1 are defined which come within the scope of the customary practice followed by persons skilled in the art (see also the documents cited in the Search Report), especially as the advantages thus achieved can readily be foreseen.
Consequently, these dependent claims do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.
4. If, in spite of the above-mentioned objections, the applicant wishes to proceed further in the regional phase, the following additional points should be noted, i.e. the corresponding amendments provided:
 - 4.1 Documents D1 to D4 should be mentioned and their contents briefly commented on in the introductory part of the description.
 - 4.2 The introductory part of the description should contain statements agreeing with any independent claim submitted.
 - 4.3 Any new independent claim should be submitted in the two-part form set out in Rule 6.3 (b) PCT.
 - 4.4 In the new set of claims reference signs should be inserted in brackets following those features which are so numbered in the figures (Rule 6.2 (b) PCT).
 - 4.5 If new features are taken into the claims, Article 19 (2) of the PCT should not be infringed and it would probably accelerate the examining process if it were indicated from which part of the application any such features are taken.